

**WHAT IS CLAIMED IS:**

1. A system for detecting a level of liquid in a tank, comprising:  
a float which produces a displacement with the liquid level;  
a sensor part provided to the tank, the sensor part sensing a position of the  
5 liquid level in accordance with the displacement of the float; and  
a casing arranged in the tank, the casing being isolated from the liquid, the  
casing accommodating the sensor part.
2. The system as claimed in claim 1, further comprising a magnet which rotates in  
10 accordance with the displacement of the float, wherein the sensor part senses an angle  
of rotation of the magnet magnetically.
3. The system as claimed in claim 1, further comprising a non-contact coupling  
which couples the float and the sensor part through the casing in a non-contact way.  
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4. The system as claimed in claim 1, wherein the sensor part comprises a  
magnetic-detection type rotation-angle sensor.
5. The system as claimed in claim 4, wherein the rotation-angle sensor comprises  
20 a housing, yokes, a Hall element, and a circuit board.
6. The system as claimed in claim 5, wherein the Hall element is disposed  
between extensions of the yokes.
- 25 7. The system as claimed in claim 5, wherein the Hall element is mounted on the  
circuit board.
8. The system as claimed in claim 1, wherein the sensor part comprises a  
potentiometer.

9. A system for detecting a level of liquid in a tank, comprising:

a float which produces a displacement with the liquid level;

5 a sensor part provided to the tank, the sensor part sensing a position of the liquid level in accordance with the displacement of the float;

a casing arranged in the tank, the casing being isolated from the liquid, the casing accommodating the sensor part; and

a magnet which rotates in accordance with the displacement of the float, wherein the sensor part senses an angle of rotation of the magnet magnetically.

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10. A system for detecting a level of liquid in a tank, comprising:

a float which produces a displacement with the liquid level;

a sensor part provided to the tank, the sensor part sensing a position of the liquid level in accordance with the displacement of the float;

15 a casing arranged in the tank, the casing being isolated from the liquid, the casing accommodating the sensor part; and

a non-contact coupling which couples the float and the sensor part through the casing in a non-contact way.